Balancing Community Needs and Pine Beetle Logging in the Robson Valley

Complaint Investigation 010371

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The Investigation

The Fraser Headwaters Alliance (the complainant) complained to the Forest Practices Board about a plan to harvest trees to reduce the threat of mountain pine beetle in the Horsey Creek to Small River area of the Rocky Mountain Trench, about 50 kilometers southeast of McBride.

The complainant believes that the Ministry of Forests (MOF) should not have approved a forest development plan (FDP) amendment by McBride Forest Industries Ltd. (the licensee) because a forest health assessment was inadequate, the risk of beetle damage overstated, and because the proposed harvesting failed to reflect publicly developed management objectives for water quality and quantity, wildlife habitat and scenic values.

Background

Most Robson Valley residents are concerned about the area's scenic values, wildlife habitat and water quality and quantity. The licensee's proposed cutblocks would be directly visible from the Yellowhead Highway, the only major travel route through the scenic valley. Several families live adjacent to the harvesting area and use water from the area's streams and springs for drinking purposes.

Many residents, including the complainant, participated in past planning processes to address community needs and forest development. For example, in 1991, the Tete Jaune-Croyden Local Resource Use Plan (LRUP) was implemented by the Robson Valley Forest District primarily to address scenic concerns. In 1999, Cabinet approved the Robson Valley Land and Resource Management Plan (LRMP) to guide all resource planning and development in the forest district.

Neither the LRUP nor the LRMP has been declared a higher level plan under the *Forest Practices Code of British Columbia Act* (the Act). However, both plans reflect a balance of values the people of Robson Valley place on their forest resources. In addition, both plans identify mountain pine beetle as a potential risk to forest resources.

Mountain pine beetle typically kills the trees it infests. Recently, the population of mountain pine beetle has been growing in the Robson Valley. MOF is concerned about the possibility of a catastrophic outbreak.

Since the 1980s, the forest district has harvested or treated individually affected trees in the Horsey Creek to Small River area to suppress pine beetle numbers. Despite those efforts, the beetle population has steadily increased. Early in 2001, MOF staff noted that the beetle population was growing beyond the ministry's ability for suppression. In April 2001, MOF allocated the area to the licensee to harvest the timber, directing the licensee to control the

beetle. The licensee immediately began assessing the beetle population and developing a harvesting strategy.

In June 2001, the licensee proposed an amendment to its 2000-2005 FDP to expedite the harvest of infested timber and timber susceptible to attack. Its goal was to harvest all trees under active attack prior to the first beetle flight in 2002. To meet that goal, the licensee received MOF's approval to shorten the time required for public review and comment on the proposed amendment.

On July 3, 2001, the complainant told the Board that the amendment should not have qualified for a shortened review and comment period. The Board investigated that complaint and in its recent report on the investigation, *Adequacy of a Public Review Period near McBride*, and concluded that the review and comment period was adequate.

On August 1, 2001, the licensee submitted its FDP amendment to MOF for approval. The district manager approved the amendment two weeks later. In February 2002, the Board decided to investigate whether it was appropriate of the district manager to approve the amendment.

Issues

1. Was the forest health assessment adequate?
2. Was the risk of beetle damage overstated, resulting in greater tree removal than necessary?
3. Were publicly developed management objectives adequately reflected by the amendment?
4. Was it appropriate for the district manager to approve the amendment?

Discussion

Section 41 of the Act requires that a district manager approve an operational plan only if satisfied the plan complies with the Act and regulations (the Code) and that it will adequately manage and conserve forest resources in the area of the plan. In order to be satisfied, a district manager must have an adequate basis of information on which to support the decision. The Board examined the information the district manager used in deciding to approve the amendment.

Was the forest health assessment adequate?

The complainant was concerned that the forest health assessment did not provide the district manager with an adequate basis of information on which to approve the amendment.

To satisfy himself that there was risk of a beetle outbreak and that the proposed cutblocks would generally encompass beetle occurrence, the district manager required the licensee to complete a forest health assessment under section 13 of the *Operational Planning Regulation* (OPR). The OPR states that a forest health assessment is "to determine the nature and extent of forest health factors." However, the Code does not specifically define what information a forest health assessment should contain.

In this case, the licensee used a standard operating procedure developed by the forest region as guidance. The assessment consisted of recording the locations of infested trees while walking the area to develop cutblocks. In addition, the assessment included information about beetle occurrence collected by MOF in previous years. As a report, the licensee submitted a "beetle attack map" to the district manager. The map showed all located infested trees and indicated whether they were under active attack or dying from an earlier attack. Beetles were present in all but one cutblock, however, the timber in that cutblock was susceptible pine, and beetles were present within 200 metres.

MOF forest health staff reviewed the map with the district manager and concluded that the number of trees under current attack was increasing. The district manager decided that there was risk of a potential beetle outbreak and that the proposed cutblocks were appropriately placed to bait and capture the existing beetles.

The district manager accepted the assessment as appropriate for forest development planning, but told the licensee that a more detailed beetle assessment would be needed before he would approve silviculture prescriptions for individual cutblocks. The district manager wanted the detailed assessment to assure that the final cutblock design would best target the removal of trees under active beetle attack.

The district manager used his discretion to demand a forest health assessment and defined the purpose of the assessment. By mapping the infested trees, the assessment demonstrated the nature and extent of mountain pine beetle in the plan area. In addition, the district manager required that more detailed beetle information be gathered before he would consider approving individual cutblocks. On that basis, the Board considers the forest health assessment adequate for the purpose of the district manager deciding to approve the FDP amendment.

Was the risk of beetle damage overstated, resulting in greater timber harvest than necessary?

The complainant said that risk of beetle damage was overstated. A recent MOF consultant's report had placed the Horsey Creek to Small River area's beetle hazard at "extreme." Using the same method, but with newer information, the complainant determined that the beetle hazard should be classed as "moderate." The complainant believes that MOF used the perception of an extreme risk to justify extensive harvesting over other means of beetle control. The complainant contends that a moderate rating should have reduced MOF's concern about a catastrophic beetle outbreak.

Although both hazard ratings used a standard method developed by the Canadian Forest Service (CFS), complete data about the forest stand was not available to either rating, so it had to be professionally estimated. Although one rating might be more reliable than the other, the two calculations did not use the same data, so are not directly comparable.

Since either hazard rating might be imprecise, the Board cannot determine if the perception of beetle risk was overstated. Regardless, the *Bark Beetle Management Guidebook* suggests that mountain pine beetle management be given a high priority where beetles are present and the hazard rating is moderate or higher. Beetles are present in the complaint area. The ratings suggest at least a moderate hazard. Management action is reasonable for a moderate degree of risk. Would a moderate rating suggest a different action than a higher rating?

The *Bark Beetle Management Guidebook* advocates the most aggressive management action consistent with available resources. The district manager told the Board that with the steadily increasing beetle population and reduced funding, MOF did not have the resources to implement effective beetle control in the area, but the licensee did through its harvesting ability. On that basis, MOF told the licensee to control the beetle. It was not necessary for the hazard rating to be higher than moderate for MOF to decide to allow the licensee to harvest to control the beetle.

The Board assessed the licensee's harvest strategy relative to the *Bark Beetle Management Guidebook* and research from the CFS. In the circumstances, the guidebook suggests a "suppression/maintain low" strategy. Suppression is the most aggressive of the strategies, selected when the desired outcome is to keep an area at a low level of infestation. To reduce the threat of mountain pine beetle to forest resources, it recommends that managers use all available tactics such as harvesting, single tree disposal, use of beetle attractants and the creation of beetle resistant forest stands.

The CFS suggests that partial cutting to a uniform density between 400 and 625 stems per hectare "beetle-proofs" the retained stand by affecting beetle dispersal conditions. The CFS notes that partial cutting could protect other resource values as well, such as visual quality and wildlife habitat. CFS also suggests that harvested areas be converted to tree species resistant to mountain pine beetle attack.

In its amendment, the licensee proposed to use an attractant to "pre-bait" outlying beetles into seven proposed cutblocks. Baited trees, infested and dead trees, as well as the largest stems most susceptible-to-attack, would be removed during an initial harvest, reducing the beetle numbers overall. The licensee would then bait beetles into the cutblocks again and harvest a second time. In that manner, the amendment proposed removal of about 50 percent of the wood volume from the cutblocks, leaving about 250 to 400 stems-per-hectare of the trees least susceptible-to-attack. Pre-harvest tree density in the cutblocks ranged from about 460 to 670 stems per hectare.

Five of the seven proposed cutblocks were already within the CFS stem density range of beetle-proof. However, the licensee's tactic of baiting to concentrate the beetles and then retaining beetle resistant trees was meant to diminish the possibility of a catastrophic beetle outbreak overall, as well as to lessen the visual impact of the harvest. Following harvest, the licensee committed to continue to individually treat and remove trees as necessary to control the beetles. In the harvested areas, the licensee said it would plant tree species not susceptible to mountain pine beetle attack.

The Board finds that the harvesting strategy selected was consistent with the *Bark Beetle Management Guidebook* and recent CFS research. While it may have been possible for the licensee to propose harvesting less timber to address the beetles, the licensee has the authority to propose the harvesting of timber in the area regardless of the perceived beetle hazard. In that respect, the licensee could propose commercial harvesting to the extent it felt necessary, provided it was mindful of community needs and other resource values.

Were publicly developed management objectives adequately reflected by the amendment?

The complainant expected that forest development would follow the publicly developed LRUP and LRMP management objectives and strategies for water quality and quantity, wildlife habitat and scenic values. If not, the complainant anticipated there would be a separate public process to revisit the objectives and strategies prior to approval of forest development.

An FDP or FDP amendment must be consistent with any higher level plan (section 10 of the Act). However, there has been no order establishing a higher level plan in the Robson Valley Forest District, so Code requirements concerning higher level plans did not apply. Despite that, the district manager said he considered the objectives of both the LRUP and LRMP in his approval and found the amendment met the intent of objectives concerning water quality and quantity, wildlife habitat and scenic values. The district manager said it was not important that the licensee follow specific LRUP or LRMP strategies as long as the objectives were met.

The LRMP provides objectives and strategies for the Rocky Mountain Trench special resource management zone, which includes the complaint area. The primary objective for the zone is to maintain scenic values and wildlife habitat. The earlier LRUP also gives objectives and strategies for the area. Most are consolidated into the more recent LRMP, however, where the plans conflict, the LRMP supersedes the LRUP direction. Where non-conflicting guidance from the LRUP was not addressed by the LRMP, government's intent was to consider that guidance in local-level plans such as landscape unit plans and forest development plans.

The Board considered whether the amendment reflected the objectives and strategies of the LRUP and LRMP.

Water

The LRUP suggests limiting soil disturbance and using small clearcuts and wide reserves to regulate water flow. The LRMP objective for water is to, "maintain or restore water quality and quantity for domestic users." LRMP strategies include designating water intakes and springs as resource features under the Code, leaving a 50-metre wide riparian management area on domestic water streams, creating a domestic water liaison committee and establishing direct communication between forest planners and water users.

The amendment shows all cutblocks as "partial cutting." No cutblock was proposed within 50 metres of a stream or within a stream gully. MOF has not designated water intakes and springs in the district as resource features, but the amendment identifies the location of water intakes and proposes wildlife tree reserves over natural springs. A water committee was not formed, but the licensee met with community residents and many of the water users. As a result of those meetings, the licensee eliminated road-crossings of domestic-water streams from its plan. The licensee also did a landslide hazard assessment—an action not required by the Code during FDP planning. While some specific strategies of the LRMP were not met, the Board is satisfied that the licensee used other methods to meet the objectives and intent of that plan.

Wildlife

The LRUP notes high values in the area for caribou, moose and deer, but provides no specific objective for wildlife habitat. To protect fish habitat the LRUP suggests protection of water quality by maintaining a 30-metre forested buffer on both sides of Horsey Creek and Small River. The LRMP objective for wildlife is to maintain or enhance wildlife and its habitat to ensure healthy populations. For fish, the objective is to protect or restore stream and riparian habitat. No specific LRMP strategies for wildlife or fish habitat are relevant to the amendment.

In its amendment, the licensee proposed to protect wildlife resources by retaining wildlife tree patches, forest connectivity and woody debris consistent with Code guidance for wildlife needs. As no cutblock was proposed within 50 metres of Horsey Creek or Small River, the 30-metre LRUP buffer was met.

Scenic Values

Both the LRUP and LRMP emphasize the area's high scenic values. The LRUP set a visual quality objective of partial retention, meaning that forest development would be visually evident but subordinate. The LRUP identifies only a limited opportunity for clear cutting; however, it also notes that partial cutting areas and volumes could be determined on a site-specific basis.

In 1998, MOF made scenic areas known under the Code. This included visual quality objectives of partial retention and retention (where forest development would not be

visually evident) in the Horsey Creek to Small River area. The next year, the LRMP established an objective to maintain or restore the scenic beauty of the Rocky Mountain Trench. Relevant LRMP strategies for visuals include the use of partial cutting, minimizing road development, promoting early detection and rapid treatment of forest pests and using computer simulations for harvest planning.

The amendment identifies partial cutting specifically to address visual quality concerns. The plan refers to narrow road rights-of-way. The licensee undertook computer modelling to ensure that proposed cutblocks would meet the assigned visual quality objectives (the Code requires a visual impact assessment for cutblocks in a known scenic area before a silviculture prescription may be approved). The licensee also made a commitment in its amendment to daily monitor its harvesting and to adjust the plan if necessary to meet the area's visual objectives.

The Board finds that publicly developed management objectives for water quality and quantity, wildlife habitat and scenic values were adequately reflected by the amendment.

Was it appropriate for the district manager to approve the amendment?

In his approval rationale, the district manager said that he was satisfied, in accordance with section 41 of the Act, that the amendment complied with the Code and would adequately manage and conserve the area's forest resources. The Board confirmed the amendment met Code requirements for higher level plans, forest health, water quality and quantity, wildlife habitat and scenic values. The district manager identified beetle management as the main focus of the amendment. The district manager told the Board that because of high scenic values and the expanding beetle population, he wanted management to focus on removing infested trees, on establishing road access to aid future beetle control efforts, and on beetle-proofing the stand to make it less susceptible to attack. MOF staff was concerned that a catastrophic outbreak of beetles might adversely impact scenic values and long-term timber supply because large clearcuts would likely be needed to salvage dead or damaged timber.

The district manager told the Board that, in addition to considering beetle management, he was aware that the licensee had met with water users and had subsequently revised its plan. No public or agency comment was received that suggested the amendment would adversely affect wildlife or fisheries and a visual impact analysis and monitoring commitment made by the licensee indicated that the district's visual quality objectives would be met.

The district manager's written rationale for approval of the amendment describes how he considered visual impacts, higher-level plans, the licensee's response to public concerns and comments, beetle management, and compliance with requirements of the Code. This indicates to the Board that the district manager weighed the issues relevant to the amendment and attempted to tailor the proposal to address both beetle management and community concerns.

The Board finds that it was reasonable for the district manager to be satisfied the amendment would adequately manage and conserve the area's forest resources. Since the amendment also met Code requirements, the Board concludes that it was appropriate for the district manager to approve the amendment.

Conclusions

1. The forest health assessment was adequate for the purpose of the district manager's decision to approve the amendment.

2. The Board could not determine if the risk of beetle damage was overstated. Regardless, either hazard rating would have led to the same conclusion — a high priority on management of mountain pine beetle. A higher than moderate rating was not necessary for the district manager to decide to use the licensee's harvesting ability to control the beetle. The licensee had discretion to propose harvesting to the extent it felt necessary, provided it was mindful of community needs and other resource values.

3. Publicly developed management objectives for water quality and quantity, wildlife habitat and scenic values were adequately reflected by the amendment.

4. It was appropriate for the district manager to approve the amendment.

Commentary

The Board commends the licensee and MOF for their efforts to reduce the threat of mountain pine beetle while addressing the significant interests of the community, in particular, scenic and water values. The Board notes that the licensee took care to consult with and engage the public in developing its proposal.

In the Board's opinion, the partial harvest proposal is a sound first-step to balancing forest resource values in the area.